

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

POWER OF ATTORNEY and CORRESPONDENCE ADDRESS INDICATION FORM

Application Number	Reissue: 6,298,092
Filing Date	October 2, 2003
First Named Inventor	Heath, Jr., et al.
Title	
Art Unit	
Examiner Name	
Attorney Docket Number	P15397XR

I hereby appoint:

☒ Practitioners associated with the Customer Number:

25694

OR

☐ Practitioner(s) named below:

Name	Registration Number

as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith.

Please recognize or change the correspondence address for the above-identified application to:

☒ The address associated with the above-mentioned Customer Number:

OR

☐ The address associated with Customer Number:

OR

☐ Firm or Individual Name

Address

Address

City

State

Zip

Country

Telephone

Fax

I am the:

☐ Applicant/Inventor.

☒ Assignee of record of the entire interest. See 37 CFR 3.71.
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)

SIGNATURE of Applicant or Assignee of Record

Name Michael A. Proksch, Sr. Patent Counsel, Intel Corp. (Reg. No. 43,021)

Signature

Michael Proksch

Date

October 2, 2003

Telephone 503.264.3059

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☐ *Total of _____ forms are submitted.

This collection of information is required by 37 CFR 1.31 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

REISSUE APPLICATION DECLARATION BY THE INVENTOR

Docket Number (Optional)

P15397XR

I hereby declare that:

Each inventor's residence, mailing address and citizenship are stated below next to their name.

I believe the inventors named below to be the original and first inventor(s) of the subject matter which is described and claimed in patent number 6,298,092, granted October 2, 2001 and for which a reissue patent is sought on the invention entitled Methods of Controlling Communication Parameters of Wireless Systems,

the specification of which

☒ is attached hereto.☐ was filed on _____ as reissue application number _____and was amended on _____
(If applicable)

I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56.

☐ I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or (f), or 365(b). Attached is form PTO/SB/02B (or equivalent) listing the foreign applications.

I verily believe the original patent to be wholly or partly inoperative or invalid, for the reasons described below. (Check all boxes that apply.)

☐ by reason of a defective specification or drawing.☒ by reason of the patentee claiming more or less than he had the right to claim in the patent.☐ by reason of other errors.

At least one error upon which reissue is based is described below. If the reissue is a broadening reissue, such must be stated with an explanation as to the nature of the broadening:

The claims originally presented (1-55 of the issued patent) received a notice of allowance on first Action. With reference to the issued '092 patent, the prosecuting attorney failed to draft or present apparatus claims drawn to a number of embodiments of the invention including, e.g., a receiver incorporating one or more aspects of the invention, and a transmitter incorporating one or more aspects of the invention. Thus, it is clear that the prosecuting attorney did not fully appreciate the scope of the invention, which caused the attorney to claim less than the Applicant was entitled to given the specification. Applicant merely wishes to correct this oversight with this reissue Application. Applicant respectfully submits that such error arose without deceptive intent, and that once it was discovered a remedy to the omission was diligently sought.

[Page 1 of 2]

This collection of information is required by 37 CFR 1.175. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

(REISSUE APPLICATION DECLARATION BY THE INVENTOR, page 2)				Docket Number (Optional) P15397XR	
All errors corrected in this reissue application arose without any deceptive intention on the part of the applicant.					
Note: To appoint a power of attorney, use form PTO/SB/81.					
Correspondence Address: Direct all communications about the application to:					
<input checked="" type="checkbox"/> Customer Number:		25694			
OR					
<input type="checkbox"/> Firm or Individual Name					
Address					
Address					
City		State		Zip	
Country					
Telephone		Fax			
I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine and imprisonment, or both, under 18 U.S.C. 1001, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this declaration is directed.					
Full name of sole or first inventor (given name, family name) Robert W. Heath, Jr.					
Inventor's signature				Date	
Residence Hayward, CA 94542				Citizenship USA	
Mailing Address 25200 Carlos Bee Blvd., Apt. 438					
Full name of second joint inventor (given name, family name) Peroor K. Sebastian					
Inventor's signature				Date	
Residence Mountain View, CA 94041				Citizenship India	
Mailing Address 262 Higdon Ave., Apt. 4					
Full name of third joint inventor (given name, family name) Arogyaswami J. Paulraj					
Inventor's signature				Date	
Residence Stanford, CA 94305				Citizenship India	
Mailing Address 59 Peter Coutts Hill					
<input type="checkbox"/> Additional joint inventors or legal representative(s) are named on separately numbered sheets forms PTO/SB/02A or 02LR attached hereto.					

U.S. PATENT ASSIGNMENT

This U.S. Patent Assignment (this "Assignment") is made as of September 18, 2002, by **Iospan Wireless, Inc.**, a Delaware corporation ("Assignor"), to **Intel Corporation**, a Delaware corporation ("Assignee").

RECITALS

A. Assignor and Assignee have entered into an Asset Purchase Agreement dated as of September 18, 2002 (the "Purchase Agreement"). All capitalized terms used herein but not otherwise defined shall have the meanings set forth in the Purchase Agreement.

B. Assignor owns the patents issued by the United States Patent and Trademark Office and set forth on Exhibit A hereto (the "Patents").

C. Pursuant to the Purchase Agreement, Assignor desires to assign to Assignee all of Assignor's right, title and interest in and to the Patents.

AGREEMENT

NOW, THEREFORE, in consideration of the foregoing premises, the mutual covenants and agreements contained in the Purchase Agreement and the covenants and agreements in this Assignment and to induce Assignee to consummate the transactions contemplated by the Purchase Agreement, Assignor agrees as follows:

1. Assignor does hereby sell, transfer, convey, assign and deliver to Assignee all of Assignor's right, title and interest in and to the Patents, including any foreign counterparts, divisions, continuations or reissues thereof, the same to be held by Assignee for Assignee's own use and enjoyment, and for the use and enjoyment of Assignee's successors, assigns and other legal representatives, as fully and entirely as the same would have been held and enjoyed by Assignor if this Assignment and sale had not been made; together with all claims for Damages by reason of past infringements of the Patents, along with the right to sue for and collect such Damages for the use and benefit of Assignee and its successors, assigns and other legal representatives.

2. Assignor hereby authorizes and requests the Commissioner of Patents and Trademarks of the United States, and any officer of any country or countries foreign to the United States, whose duty it is to issue patents or other evidence or forms of intellectual property protection or applications as aforesaid, to issue the same to Assignee and its successors, assigns and other legal representatives in accordance with the terms of this instrument.

3. Assignor hereby covenants with Assignee and the successors and permitted assigns of Assignee that, from time to time after the date hereof, Assignor will promptly execute and deliver to Assignee or shall promptly procure the execution and delivery of any and all such instruments of sale, transfer, conveyance, assignment and delivery, consents, assurances, powers

of attorney and other instruments as may reasonably be requested by Assignee in order to vest in Assignee all of Assignor's right, title and interest in and to the Patents and carry out the purpose and intent of this Assignment and the Purchase Agreement.

IN WITNESS WHEREOF, Assignor has executed this Assignment on the date first above written.

IOSPAN WIRELESS, INC.

By: 

Name: Levent Gun

Title: President and Chief Executive Officer

[SIGNATURE PAGE TO U.S. PATENT ASSIGNMENT]

EXHIBIT A

<u>Patent No.</u>	<u>Title</u>	<u>Inventor</u>	<u>Issued Date</u>	<u>Serial No.</u>
6,067,290	Spatial Multiplexing in a Cellular Network	Paulraj, Heath, Sebastian, Gesbert	5/23/00	09/364,146
6,377,636	Method And Wireless Communications Systems For Interference Mitigation	Paulraj, Sebastian, Tellado, Heath	4/23/00	09/432,295
6,351,499	Method And Wireless Systems Using Multiple Antennas And Adaptive Control For Maximizing A Communication Parameter	Paulraj, Sebastian, Gesbert, Tellado	2/26/02	09/464,372
6,377,632	Wireless Communication System And Method Of Using Stochastic Space-Time / Frequency Division Multiplexing	Sebastian, Tellado, Heath, Talwar, Bolcskei	4/23/02	09/490,698
6,377,819	Wireless Communication System Using Combined Transmit And Receive Processing	Gesbert, Sebastian, Paulraj	4/23/02	09/544,621
6,442,214	A Diversity Transmitter Based On Linear Transform Processing Of Transmitted Information	Bolcskei, Sebastian, Talwar, Paulraj	8/27/02	09/574,498
6,298,092	Methods Of Controlling Communication Parameters Of Wireless Systems	Heath, Sebastian, Paulraj	10/2/01	09/585,948
6,400,699	A Transmission Scheduler For A Multiple Antenna Wireless Cellular Network	Airy, Al-Dabagh, Tellado, Mishra, Fan, Sebastian, Paulraj	6/4/02	09/660,246

Ackn wledgment by N tary Public

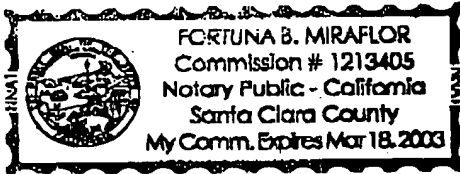
State of CaliforniaCounty of Santa Clara

On this 17th day of Sept, 2002 before me, the undersigned Notary Public, personally appeared Levent Gun, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged to me that he or she executed the same.

Seal:

Signature: [Signature]Name: [Signature]

Notary Public



[ACKNOWLEDGMENT OF U.S. PATENT ASSIGNMENT]

P11145

1000000001



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
ASSISTANT SECRETARY AND COMMISSIONER
OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

JANUARY 09, 2001

PTAS

GW1-102/01P

101512353A

LUMEN
JOSHUA D. ISENBERG
45 CABOT AVENUE, SUITE 110
SANTA CLARA, CALIFORNIA 95051

UNITED STATES PATENT AND TRADEMARK OFFICE
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 10/03/2000

REEL/FRAME: 011216/0241
NUMBER OF PAGES: 4

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:
HEATH, ROBERT W., JR.

DOC DATE: 09/26/2000

ASSIGNOR:
SEBASTIAN, PEROOR K.

DOC DATE: 09/27/2000

ASSIGNOR:
PAULRAJ, AROGYASWAMI J.

DOC DATE: 09/27/2000

ASSIGNEE:
GIGABIT WIRELESS, INC.
3099 NORTH 1ST STREET
SAN JOSE, CALIFORNIA 95134

SERIAL NUMBER: 09585948
PATENT NUMBER:

FILING DATE: 06/02/2000
ISSUE DATE:

LUMEN 32-01



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
ASSISTANT SECRETARY AND COMMISSIONER
OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

FEBRUARY 26, 2001

PTAS



101553831A

LUMEN
MAREK ALBOSZTA
45 CABOT AVE
SUITE 110
SANTA CLARA, CA 95051

UNITED STATES PATENT AND TRADEMARK OFFICE
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 12/07/2000

REEL/FRAME: 011336/0876
NUMBER OF PAGES: 19

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:
GIGABIT WIRELESS, INC.

DOC DATE: 12/18/1998

ASSIGNEE:
IOSPAN WIRELESS, INC.
3099 NORTH 1ST STREET
SAN JOSE, CALIFORNIA 95134

SERIAL NUMBER: 09432295
PATENT NUMBER:

FILING DATE: 11/02/1999
ISSUE DATE:

SERIAL NUMBER: 09464372
PATENT NUMBER:

FILING DATE: 12/15/1999
ISSUE DATE:

SERIAL NUMBER: 09490698
PATENT NUMBER:

FILING DATE: 01/24/2000
ISSUE DATE:

SERIAL NUMBER: 09544621
PATENT NUMBER:

FILING DATE: 04/06/2000
ISSUE DATE:

011336/0876 PAGE 2

SERIAL NUMBER: 09585948
PATENT NUMBER:

FILING DATE: 06/02/2000
ISSUE DATE:

SERIAL NUMBER: 09609591
PATENT NUMBER:

FILING DATE: 06/30/2000
ISSUE DATE:

SERIAL NUMBER: 09665149
PATENT NUMBER:

FILING DATE: 09/19/2000
ISSUE DATE:

SERIAL NUMBER: 09687965
PATENT NUMBER:

FILING DATE: 10/13/2000
ISSUE DATE:

JEEVON JONES, EXAMINER
ASSIGNMENT DIVISION
OFFICE OF PUBLIC RECORDS
